



Play behavior of dairy calves in a cow-calf contact system on pasture

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Method: direct observation

- 26 cow-calf pairs
- Calves aged between 5 and 95 days
- 16 observation days over 2 months
- Total observation time
→ 48 h: Continuous sampling, 5 min observation/calf/h

Genetically polled herd



39 cows

11 mothers, 28 cows

11 calves: 6 ♀, 5 ♂

Horned herd



45 cows

14 mothers, 30 cows

15 calves: 8 ♀, 7 ♂

Recorded behaviors

Social play



Locomotor play



Age and play partner had no effect on social play duration

- Social play initiated by the calf only
- Social play bout [s] ~ Age + Sex + Receiver + (1 | Herd/ID)

→ Familiarity affects the choice of playmates more than the age (Špinka, Newberry, and Bekoff 2001, TQRB 76, 141)

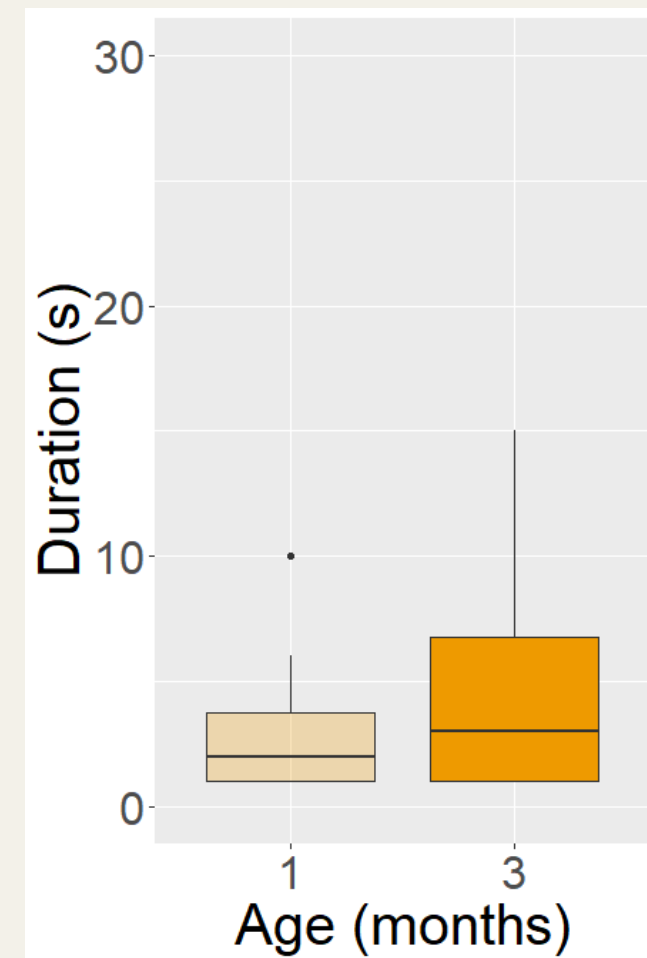
Social play bout duration [s]			
Partner	LSM	SE	p
Calf	4.5	1.1	0.1
Mother	4.5	1.3	
Age			
1-month	6.6	3.0	0.5
3-month	3.4	0.9	

Age had no effect on locomotor play duration

- Duration of locomotor play [s per bout] ~ Age + Sex + (1 | Herd/ID)

Duration of locomotor play [s per bout]			
Age	LSM	SE	p
1-month	2.1	0.6	0.4
3-month	3.4	0.8	

→ Level of play behavior depends on space opportunity
(Waiblinger et al. 2020, JDR 87, 144)



Study by Gillet et al. (2023) 5

Take home message

Behavior of dairy calves in a cow-calf contact system under grazing conditions:

- Familiarity affects the choice of playmates
- Younger calves performed as much locomotor play as older ones
- Sex of calf had no effect on the observed behaviors



Literature

Gillet, Veissier, Waiblinger and Barth, 2023. Social interactions and play behaviour of dairy calves in a cow-calf contact system on pasture, in: 56th Congress of the International Society for Applied Ethology ISAE 2023. Tallinn, Estonia.

Spinka, Newberry and Bekoff. 2001. “Mammalian Play: Training for the Unexpected.” *The Quarterly Review of Biology* 76 (2): 141–68. <https://doi.org/10.1086/393866>.

Waiblinger, Wagner, Hillmann and Barth. 2020. “Play and Social Behaviour of Calves with or without Access to Their Dam and Other Cows.” *Journal of Dairy Research* 87 (S1): 144–47. <https://doi.org/10.1017/S0022029920000540>.

Thank you for your attention

Questions to the audience



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